

10/563656

IAP15 Rec'd PCT/PTO 05 JAN 2006

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QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.

By Deborah Berwick  
Deborah Berwick

Attorney Docket No. 54-000510US  
Client Ref. No. 1002.1 US / AMB0100P

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

J. Christopher Anderson et al.

Examiner: Unassigned

Application No.: Not Yet Known

Art Unit: Unassigned

Filed: 5 January 2006

STATEMENT ACCOMPANYING  
SEQUENCE LISTING

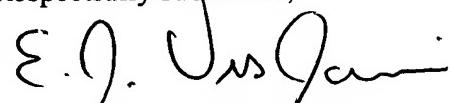
For: **COMPOSITIONS OF  
ORTHOGONAL GLUTAMYL-TRNA  
AND AMINOACYL- TRNA  
SYNTHETASE PAIRS AND USES  
THEREOF**

Mail Stop Sequence Listing  
Commissioner for Patents  
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Sir:

The undersigned hereby states that the Sequence Listing submitted concurrently herewith does not include matter which goes beyond the content of the application as filed and that the information recorded on the diskette submitted concurrently herewith is identical to the written Sequence Listing.

Respectfully submitted,



Edward J. DesJardins, Ph.D.  
Reg. No. 51,162

5 January 2006  
Date

QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.  
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EJD:db

54-000510US.ST25.txt  
SEQUENCE LISTING

<110> The Scripps Research Institute  
 Anderson, J C  
 Schultz, Peter G  
 Santoro, Stephen

<120> COMPOSITIONS OF ORTHOGONAL GLUTAMYL-tRNA AND AMINOACYL-tRNA  
 SYNTHETASE PAIRS AND USES THEREOF

<130> 54-000510PC

<140> PCT/US 04/021813  
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165 170 175

Tyr Ala Arg Lys Leu Ile Glu Met Gly Lys Ala Tyr Thr Cys Phe Cys  
180 185 190

Ser Gln Glu Glu Phe Lys Lys Phe Arg Asp Ser Gly Glu Glu Cys Pro  
195 200 205

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210 215 220

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Arg Tyr Ile Tyr Glu Tyr Phe Gly Trp Ile Tyr Pro Ile Thr Lys His  
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370 375 380

Ser Val Ser Leu Lys Asn Leu Tyr Ala Glu Asn Arg Lys Ile Ile Asp  
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Page 16

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Leu Glu Leu Arg Arg His Gln Gly Tyr Ala Glu Asp Ala Ile Arg Gly  
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Pro Arg Pro Glu Ile Gly Asn Lys Tyr Ile Val Trp Pro Leu Leu Asp  
Page 20

54-000510US.ST25.txt  
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Arg Gly Lys Asp Leu Ile Asp Ser Glu Lys Arg Gln Thr Tyr Ile Tyr  
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Lys Tyr Phe Gly Trp Thr Tyr Pro Lys Thr Thr His Trp Gly Arg Val  
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Asp Ile Glu Lys Leu Asn Val Gly Ser Val Leu Arg Leu Lys Asp Leu  
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54-000510US.ST25.txt

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Ser Trp Lys Lys Ile Tyr Gly Leu Asn Arg Ser Ile Leu Glu Glu Glu  
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Ala Arg Arg Tyr Phe Phe Ala Ala Asp Pro Val Lys Leu Glu Val Val  
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Gly Leu Pro Gly Pro Val Arg Val Glu Arg Pro Leu His Pro Asp His  
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Pro Glu Ile Gly Asn Arg Val Leu Glu Leu Arg Gly Glu Val Tyr Leu  
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Pro Gly Asp Asp Leu Gly Glu Gly Pro Leu Arg Leu Ile Asp Ala Val  
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Glu Ser Ala Leu Glu Ala Glu Val Ile Met Pro Asp Ala Ser Arg Val  
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54-000510US.ST25.txt

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<213> Pyrococcus horikoshii

<400> 77

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Ile Asn Lys Val Val Glu Glu Val Asn Ser Leu Ala Arg Asp Glu Gln  
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Leu Glu Lys Leu Lys Asp Ile Tyr Pro Glu Tyr Phe Glu Lys Lys Glu  
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Glu Lys Lys Glu Lys Lys Gly Leu Pro Leu Leu Pro Lys Ala Glu Lys  
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Gly Lys Val Val Thr Arg Phe Ala Pro Asn Pro Asp Gly Ala Phe His  
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Leu Gly Asn Ala Arg Ala Ala Ile Leu Ser Tyr Glu Tyr Ala Lys Met  
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Tyr Gly Gly Lys Phe Ile Leu Arg Phe Asp Asp Thr Asp Pro Lys Val  
130 135 140

Lys Arg Pro Glu Pro Ile Phe Tyr Lys Met Ile Ile Glu Asp Leu Glu  
145 150 155 160

Trp Leu Gly Ile Lys Pro Asp Glu Ile Val Tyr Ala Ser Asp Arg Leu  
165 170 175

Glu Ile Tyr Tyr Lys Tyr Ala Glu Glu Leu Ile Lys Met Gly Lys Ala  
180 185 190

Tyr Val Cys Thr Cys Pro Pro Glu Lys Phe Arg Glu Leu Arg Asp Lys  
195 200 205

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Gly Ile Pro Cys Pro His Arg Asp Glu Pro Val Glu Val Gln Leu Glu  
210 215 220

Arg Trp Lys Lys Met Leu Asn Gly Glu Tyr Lys Glu Gly Glu Ala Val  
225 230 235 240

Val Arg Ile Lys Thr Asp Leu Asn His Pro Asn Pro Ala Val Arg Asp  
245 250 255

Trp Pro Ala Leu Arg Ile Ile Asp Asn Pro Asn His Pro Arg Thr Gly  
260 265 270

Asn Lys Tyr Arg Val Trp Pro Leu Tyr Asn Phe Ala Ser Ala Ile Asp  
275 280 285

Asp His Glu Leu Gly Val Thr His Ile Phe Arg Gly Gln Glu His Ala  
290 295 300

Glu Asn Glu Thr Arg Gln Arg Tyr Ile Tyr Glu Tyr Phe Gly Trp Glu  
305 310 315 320

Tyr Pro Val Thr Ile His His Gly Arg Leu Ser Ile Glu Gly Val Val  
325 330 335

Leu Ser Lys Ser Lys Thr Arg Lys Gly Ile Glu Glu Gly Lys Tyr Leu  
340 345 350

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Gly Ile Leu Pro Glu Ala Ile Lys Glu Leu Ile Ile Glu Val Gly Leu  
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Lys Lys Ser Asp Ala Thr Ile Ser Trp Glu Asn Leu Ala Ala Ile Asn  
385 390 395 400

Arg Lys Leu Val Asp Pro Ile Ala Asn Arg Tyr Phe Phe Val Ala Asp  
405 410 415

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420 425 430

Pro Leu His Pro Asp His Pro Glu Arg Gly Val Arg Arg Leu Lys Phe  
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Lys Pro Gly Asn Phe Val Arg Leu Lys Asp Leu Phe Asn Val Glu Ile  
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54-000510US.ST25.txt

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<211> 575

<212> PRT

<213> **Sulfolobus solfataricus**

<400> 79

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Ser Lys Ile Ile Ala Glu Arg Pro Glu Leu Arg Ser Asn Ala Arg Glu		
35	40	45

Ile Val Lys Ile Ile Lys Glu Ile Ile Glu Gln Val Asn Ser Leu Thr		
50	55	60

Leu Glu Gln Gln Leu Thr Glu Ile Lys Ala Lys Tyr Pro Glu Leu Leu			
65	70	75	80

Glu Glu Lys Lys His Glu Glu Lys Arg Lys Val Leu Pro Pro Leu Pro		
85	90	95

Asn Val Lys Gly Gln Val Val Thr Arg Phe Ala Pro Asn Pro Asp Gly		
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Pro Leu His Leu Gly Asn Ala Arg Ser Ala Ile Leu Ser Tyr Glu Tyr		
115	120	125

Ala Lys Met Tyr Asn Gly Lys Phe Ile Leu Arg Phe Asp Asp Thr Asp		
130	135	140

Pro Lys Val Lys Arg Pro Ile Leu Asp Ala Tyr Asp Trp Ile Lys Glu			
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Glu Arg Leu Glu Leu Tyr Tyr Lys Tyr Ala Arg Tyr Leu Ile Glu Lys  
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Gly Tyr Ala Tyr Val Asp Thr Cys Asp Ser Ser Ile Phe Arg Lys Phe  
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Arg Asp Ser Arg Gly Lys Met Lys Glu Pro Glu Cys Leu His Arg Ser  
210 215 220

Ser Ser Pro Glu Ser Asn Leu Glu Leu Phe Glu Lys Met Leu Gly Gly  
225 230 235 240

Lys Phe Lys Glu Gly Glu Ala Val Val Arg Leu Lys Thr Asp Leu Ser  
245 250 255

Asp Pro Asp Pro Ser Gln Ile Asp Trp Val Met Leu Arg Ile Ile Asp  
260 265 270

Thr Ala Lys Asn Pro His Pro Arg Val Gly Ser Lys Tyr Trp Val Trp  
275 280 285

Pro Thr Tyr Asn Phe Ala Ser Ile Ile Asp Asp His Glu Leu Gly Ile  
290 295 300

Thr His Val Leu Arg Ala Lys Glu His Met Ser Asn Thr Glu Lys Gln  
305 310 315 320

Arg Tyr Ile Ser Glu Tyr Met Gly Trp Glu Phe Pro Glu Val Leu Gln  
325 330 335

Phe Gly Arg Leu Arg Leu Glu Gly Phe Met Met Ser Lys Ser Lys Ile  
340 345 350

Arg Gly Met Leu Glu Lys Gly Thr Asn Arg Asp Asp Pro Arg Leu Pro  
355 360 365

Thr Leu Ala Gly Leu Arg Arg Arg Gly Ile Leu Pro Asp Thr Ile Lys  
370 375 380

Asp Val Ile Ile Asp Val Gly Val Lys Val Thr Asp Ala Thr Ile Ser  
385 390 395 400

Phe Glu Asn Ile Ala Ala Ile Asn Arg Lys Lys Leu Asp Pro Val Ala  
405 410 415

Lys Arg Ile Met Phe Val Lys Asp Ala Glu Glu Phe Ser Val Glu Leu  
420 425 430

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Pro Glu Ser Leu Asn Ala Lys Ile Pro Leu Ile Pro Ser Lys Gln Glu  
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Met Asn Arg Thr Ile Ile Val Asn Pro Gly Asp Lys Ile Leu Ile Glu  
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Ser Asn Asp Ala Glu Asp Asn Ser Ile Leu Arg Leu Met Glu Leu Cys  
465 470 475 480

Asn Val Lys Val Asp Lys His Asn Arg Lys Leu Ile Phe His Ser Lys  
485 490 495

Thr Leu Asp Glu Ala Lys Lys Val Asn Ala Lys Ile Val Gln Trp Val  
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Lys Ser Asn Glu Lys Val Pro Val Met Val Glu Lys Ala Glu Arg Asp  
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Glu Ile Lys Met Ile Asn Gly Tyr Ala Glu Lys Ile Ala Ala Asp Leu  
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<223> n is a, c, g, or t

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